

Title (en)  
TUBULAR REACTOR

Publication  
**EP 0221849 B1 19881012 (DE)**

Application  
**EP 86810480 A 19861027**

Priority  
• CH 283186 A 19860716  
• CH 483485 A 19851101

Abstract (en)  
[origin: US4737349A] A reactor for accelerating heterogeneous reactions and affording an increased yield rate per unit of time and space comprises a cylindrical reactor tube containing in its interior a piston having relatively flat profiling in its skirt in the form of annular ribs and grooves therebetween, inlet conduits leading into the interior of the reaction tube through the bottom closure thereof, which may also be introduced from above and extend axially through the piston, an outlet tube is provided in the region of the top closure of the reaction tube, the piston is being connected via a piston rod with a vibrator imparting axial oscillatory movement of the piston, these oscillations generating turbulences in the annular piston grooves which effect a thorough mixing of the reaction participants without causing any noteworthy re-mixing of the resulting reaction products with the starting components.

IPC 1-7  
**B01J 19/18; C07C 113/04**

IPC 8 full level  
**B01J 19/18** (2006.01)

CPC (source: EP US)  
**B01J 19/185** (2013.01 - EP US); **B01J 19/1862** (2013.01 - EP US); **B01J 2219/00058** (2013.01 - EP US)

Cited by  
CN112354507A; WO9202650A1

Designated contracting state (EPC)  
BE CH DE ES FR GB IT LI NL

DOCDB simple family (publication)  
**EP 0221849 A1 19870513; EP 0221849 B1 19881012**; BR 8605388 A 19870811; DE 3660883 D1 19881117; ES 2004470 B3 19901101; US 4737349 A 19880412; US 4820807 A 19890411

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**EP 86810480 A 19861027**; BR 8605388 A 19861031; DE 3660883 T 19861027; ES 86810480 T 19861027; US 14216688 A 19880111; US 92297586 A 19861024